

desirableness of forming in each of our principal cities—such as Quebec, Montreal, and Toronto, as complete a cabinet or museum of the minerals and fossils of the country, scientifically arranged, and *popularly described*, as the extent of present knowledge and research will admit; such museums would likewise gradually accumulate specimens from abroad, and in time might enlarge their boundaries, so as to embrace most or all of the departments of the wide and interesting field of Natural History generally. While thus exhibiting the natural products and curiosities of the country, these Institutions might easily be made the exponents of our industrial and social progress in agriculture, manufactures, and the useful and ornamental arts. Such a scheme, we think, would rank among the best means for improving the taste and educating the minds of the people, and of affording them, as well as strangers that visit us, just conceptions of the resources of this young and extensive country. Such a scheme is, in our estimation, well worthy of public and private support.]—*Edron*.

#### NEW BRICK MACHINE.

On Thursday of last we visited the Steam Brick Works of Tufts and Boyden, in Somerville, to witness the operation of a machine for making bricks from dry clay, invented and patented by Woodworth and Mower of Boston. This machine is of iron, simple, compact and massive, weighing seventeen tons, and was made by Lyman Kingsley, Esq., at his extensive works at Canton, Mass., and is a good sample of the substantial and perfect work for which Mr. Kingsley's establishment is justly celebrated. It works with great steadiness and precision, and turns out three thousand bricks per hour. The machine and the clay pulverizer are operated by a steam engine of twenty horse power. The clay is first dried, then ground, by passing between heavy rollers, then screened or sifted and passed into the machine in a uniform state, where it is subjected to the immense power of the machine, and a beautiful perfect face brick is produced, almost as smooth and dense as polished marble. The bricks are taken from the machine and immediately set in the kiln ready for burning, thereby obviating the necessity of spreading on the yard to dry before burning, as well as injury or loss from wet weather. By this process, a superior face brick can be produced at less expense than the coarsest common brick by the old method.

This machine is the result of three years' close application and hard study on the part of the patentees, Messrs. Woodworth and Mower, and may justly be considered one of the most valuable and important inventions that have been made. No one can witness its operations, and compare it with the old fashioned way of brick-making, without being filled with surprise and admiration.—*Boston Journal*.

**WIRE-WORK FOR CEILINGS.**—Some two years back you were the first to usher forth the application of wire work for ceilings in lieu of lath. Since that time but little has been done in it here in England, but the statement has been copied from your paper through all nations, and translated into all languages, and

the material is now being universally adopted. The objection to it here was its expense, but that ought to weigh but as a feather in the scale as compared with the security of life and property. I can say that the ceilings already finished are perfect, without even a crack in them; unlike the wood, here is neither contraction, expansion, nor absorption. Nor have we been idle in testing it in every way: it has been subjected to the severest trial by flame, without producing even the smallest effect of ignition: in case of fire in one apartment, to that alone it is confined. What is there that is so inflammable as the dry lath?—the ceiling falls, the lath is lighted, and destruction is inevitable. The cost has been reduced, viz. plain wire-work to two pence per square foot, and galvanized, to two pence three farthings per square foot.—*Builder*.

**CHATSWORTH AND PAXTON.**—On my way home, I passed three days at Chatsworth, where were the Fitzwilliams, and a very agreeable party. The principal object of admiration in that magnificent establishment is the conservatory, covering more than three quarters of an acre, built and laid out with the greatest taste and judgment. The whole is the work of Paxton, planned by his own genius and courage, contrary to the opinion of the eminent architects consulted, but now allowed by them to have been most successfully executed. Paxton is, probably the ablest gardener in Europe, and has raised himself to eminence by native genius, unceasing activity and unblemished character. This is much to say of a man yet alive, but I do not expect to have ever to retract it. It is at Chatsworth alone the Duke of Devonshire's character can be fully appreciated. There, are seen and felt his generous hospitality, his unaffected friendly attentions, and a benevolence extending to every class, which I have never known surpassed —  
*Notes by Sir Robert Heron.*

**LAND FORMATIONS IN THE HIGHER REGION OF NORTH AMERICA.**—The eastern coast-line of Lake Winnipeg is in general swampy, with granite knolls rising through the soil, but not to such a height as to render the scenery hilly. The pine forest skirts the shore at the distance of two or three miles, covering gently rising lands; and the breadth of continuous lake surface seems to be in process of diminution, in the following way:—A bank of sand is first drifted up, in the line of a chain of rocks which may happen to lie across the mouth of an inlet or bay. Carices, balsam poplars, and willows speedily take root therein; and the basin which lies behind, cut off from the parent lake, is gradually converted into a marsh by the luxuriant growth of aquatic plants. The sweet gale next appears on its borders, and drift-wood, much of it rotten and comminuted, is thrown up on the exterior bank, together with some roots and stems of larger trees. The first spring storms covers these with sand, and in a few weeks the vigorous vegetation of a short but active summer binds the whole together by a network of the roots of hents and willows. Quantities of drift-sand pass before the high winds into the swamp behind, and, weighing down the flags and willow branches, prepare a fit soil for succeeding crops. During the winter of this climate, all remains fixed as the summer left it; and as the next season is far advanced before the bank thaws, little of it washes back into the water; but, on the contrary, every gale blowing from the lake brings a fresh supply of sand from the shoals which are continually forming along the shore. The floods raised by melting snows cut narrow channels through the frozen beach, by which the ponds behind are drained of their superfluous waters.